

# TROUBLESHOOTING GUIDE

## 1. ENGINE

※ This guide is not intended to cover every condition, however many of the more common possibilities are listed.

| Trouble                                                                                                           | Service                                                                                                                                                                                                                                                                                                                                                     | Remark                           |
|-------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------|
| The engine oil pressure lamp lights up when engine speed is raised after completion of warm up.                   | <ul style="list-style-type: none"> <li>· Add the oil to the specified level.</li> <li>· Replace the oil filter cartridge.</li> <li>· Check oil leakage from the pipe or the joint.</li> <li>· Replace the monitor.</li> </ul>                                                                                                                               |                                  |
| Steam is emitted from the top part of the radiator (the pressure valve).<br>Coolant level warning lamp lights up. | <ul style="list-style-type: none"> <li>· Supply coolant and check leakage.</li> <li>· Adjust fan belt tension.</li> <li>· Wash out inside of cooling system.</li> <li>· Clean or repair the radiator fin.</li> <li>· Check the thermostat.</li> <li>· Tighten the radiator cap firmly or replace the cap itself.</li> <li>· Replace the monitor.</li> </ul> |                                  |
| The engine does not start when the starting motor is turned over.                                                 | <ul style="list-style-type: none"> <li>· Confirm fuel supply.</li> <li>· Repair where air is leaking into fuel system.</li> <li>· Check the injection pump or the nozzle.</li> <li>· Check the valve clearance.</li> <li>· Check engine compression.</li> <li>· In cold weather, check if fuel warmer system is working normal.</li> </ul>                  | Refer to the pages 3-40 and 2-4. |
| Exhaust gas is white or blue.                                                                                     | <ul style="list-style-type: none"> <li>· Adjust to specified oil quantity.</li> <li>· Replace with specified fuel.</li> </ul>                                                                                                                                                                                                                               |                                  |
| Exhaust gas occasionally turns black.                                                                             | <ul style="list-style-type: none"> <li>· Clean or replace the air cleaner element.</li> <li>· Check the nozzle.</li> <li>· Check engine compression.</li> <li>· Clean or replace the turbocharger.</li> </ul>                                                                                                                                               |                                  |
| Combustion noise occasionally changes to breathing sound.                                                         | <ul style="list-style-type: none"> <li>· Check the nozzle.</li> </ul>                                                                                                                                                                                                                                                                                       |                                  |
| Unusual combustion noise or mechanical noise.                                                                     | <ul style="list-style-type: none"> <li>· Confirm fuel quality.</li> <li>· Check over-heating</li> <li>· Replace the muffler.</li> <li>· Adjust valve clearance.</li> </ul>                                                                                                                                                                                  |                                  |

## 2. ELECTRICAL SYSTEM

| Trouble                                                                                                                | Service                                                                                                                                                                                 | Remark |
|------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------|
| Work lamp does not glow brightly or flickers even when engine runs at high idle.                                       | <ul style="list-style-type: none"> <li>· Check for loose terminals and open-circuit wiring.</li> <li>· Adjust belt tension.</li> </ul>                                                  |        |
| Battery charging lamp does not go out even when engine runs at high speed.                                             | <ul style="list-style-type: none"> <li>· Check the alternator.</li> <li>· Check and repair wiring.</li> </ul>                                                                           |        |
| Unusual noise is emitted from the alternator.                                                                          | <ul style="list-style-type: none"> <li>· Check the alternator.</li> </ul>                                                                                                               |        |
| Starting motor does not turn when starting switch is turned ON.                                                        | <ul style="list-style-type: none"> <li>· Check and repair the wiring.</li> <li>· Charge the battery.</li> <li>· Check the starting motor.</li> <li>· Check the safety relay.</li> </ul> |        |
| The pinion of the starting motor keeps going in and out.                                                               | <ul style="list-style-type: none"> <li>· Charge the battery.</li> <li>· Check the safety relay.</li> </ul>                                                                              |        |
| Starting motor turns the engine sluggishly.                                                                            | <ul style="list-style-type: none"> <li>· Charge the battery.</li> <li>· Check the starting motor.</li> </ul>                                                                            |        |
| The starting motor disengages before the engine starts up.                                                             | <ul style="list-style-type: none"> <li>· Check and repair the wiring.</li> <li>· Charge the battery.</li> </ul>                                                                         |        |
| The engine warming up lamp does not go ON.                                                                             | <ul style="list-style-type: none"> <li>· Check and repair wiring.</li> <li>· Check the monitor.</li> </ul>                                                                              |        |
| The engine oil pressure lamp does not light up when engine is stationary (when the starting switch is in ON position.) | <ul style="list-style-type: none"> <li>· Check the monitor.</li> <li>· Check the caution lamp switch.</li> </ul>                                                                        |        |
| Battery charging lamp does not light up when the engine is stationary. (when the starting switch is in ON position.)   | <ul style="list-style-type: none"> <li>· Check the monitor.</li> <li>· Check and repair the wiring.</li> </ul>                                                                          |        |

### 3. OTHERS

| Trouble                                                      | Service                                                                                                                                                  | Remark |
|--------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------|--------|
| Track slips out of place.<br>Excessive wear of the sprocket. | <ul style="list-style-type: none"> <li>Adjust tension of track.</li> </ul>                                                                               |        |
| Bucket either rises slowly or not at all.                    | <ul style="list-style-type: none"> <li>Add oil to specified level.</li> </ul>                                                                            |        |
| Slow speed of travel, swing, boom, arm and bucket.           | <ul style="list-style-type: none"> <li>Add oil to specified level.</li> </ul>                                                                            |        |
| Unusual noise emitted from pump.                             | <ul style="list-style-type: none"> <li>Clean the hydraulic tank strainer.</li> </ul>                                                                     |        |
| Excessive oil temperature rise of hydraulic oil.             | <ul style="list-style-type: none"> <li>Clean and check the oil cooler.</li> <li>Adjust fan belt tension.</li> <li>Add oil to specified level.</li> </ul> |        |